IN THE CLAIMS

The following is a current listing of claims and will replace all prior versions and listings of claims in the application. Please amend the claims as follows.

1. (Previously Presented) A translator device, comprising:

one or more processors; and

a memory storing program instructions executable by the one or more processors to cause the translator device to implement:

a receiver circuit manager configured to receive information of a source format, wherein the received information indicates a destination device;

a message converter configured to convert the received information from the source format to a destination format, wherein said converting includes using a poly-dimensional finite state machine that is configured to convert the received information based at least in part on three or more different variables, and wherein the message converter is configured to support converting the received information to at least one format other than the destination format; and

a message sender configured to transmit the converted information to the destination device using the destination format;

wherein the three or more different variables include a variable that specifies the destination device, a destination protocol corresponding to the destination device, or a destination application corresponding to the destination device.

2. (Previously Presented) The translator device of claim 1, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and at least one subsequent stage, and wherein the first stage is configured to use the three or more different variables.

3. (Previously Presented) The translator device of claim 1, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and a subsequent stage, and wherein the subsequent stage of said multi-stage pipeline is configured to determine a result as a function of one or more of the three or more different variables, and wherein said one or more of the three or more different variables includes a determined result from the first stage of the multi-stage pipeline.

4. (Previously Presented) A method, comprising:

a translator device receiving information of a source protocol, wherein the received information includes an indication of a destination device;

the translator device determining a destination protocol corresponding to the destination device;

the translator device converting the received information to the destination protocol, wherein said converting includes using a poly-dimensional finite state machine that is configured to convert the received information based at least in part on three or more different variables, wherein the three or more different variables include a variable that specifies the destination device, the destination protocol corresponding to the destination device, or a destination application corresponding to the destination device; and

the translator device sending the converted information to the destination device using the destination protocol.

5. (Canceled)

6. (Previously Presented) The method of claim 4, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and a subsequent stage, and wherein the subsequent stage of said multi-stage pipeline is configured to determine a result as a function of one or more of the three or more different variables, and wherein said one or more of the three or more different variables of includes a determined result from a prior stage of the multi-stage pipeline.

7. (Currently Amended) An article of manufacture including a computer-readable memory medium having instructions stored thereon that, in response to execution by a device, cause the device to perform ~~a method~~ operations comprising:

receiving information of a source format, wherein the received information indicates a destination device;

determining a destination format corresponding to the destination device;

converting the received information to the destination format, wherein said converting includes using poly-dimensional finite state machine that is configured to convert the received information based at least in part on three or more different variables, wherein the three or more different variables include a variable that specifies the destination device, the destination format corresponding to the destination device, or a destination application corresponding to the destination device; and

sending the converted information to the destination device using the destination format.

8. (Previously Presented) The article of manufacture of claim 7, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and at least one subsequent stage, wherein the first stage of said multi-stage pipeline is configured to use the three or more different variables.

9-11. (Canceled)

12. (Previously Presented) A method, comprising:

a communication device receiving an input message transmitted using a source communication protocol, wherein the input message has a source data format;

the communication device generating an output message from the received input message, wherein the output message has a destination data format and is to be transmitted using a destination communication protocol;

wherein said generating includes using a multi-stage, poly-dimensional finite state machine to:

convert the source communication protocol of the input message to the destination communication protocol of the output message; and

convert the source data format to the destination data format of the output message;

where the multi-stage, poly-dimensional finite state machine is configured to convert the received information based at least in part on three or more different inputs, and wherein the three or more inputs include an input that is indicative of the source data format, the source communication protocol, the destination data format, or the destination communication protocol.

13. (Previously Presented) The method of claim 12, the finite state machine having a first stage and one or more additional stages, wherein each of the stages generates an output from two or more inputs using a poly-dimensional matrix, and wherein each of the one or more additional stages includes an output from a previous stage as an input.

14. (Previously Presented) The method of claim 12, further comprising determining, from the input message, the source communication protocol and source data format.

15. (Previously Presented) The method of claim 12, wherein the inputs to various stages of the finite state machine further include one or more of the following inputs: 1) inputs indicative of a) the type of source application that originated the input message and b) the type of destination application to which the output message is directed; 2) inputs indicative of a) the type of a first device from which the input message originated and b) the type of a second device to which the output message is directed; 3) input indicative of a current connection status between the first and second devices, and 4) input indicative of the current state of the finite state machine.

16. (Previously Presented) The method of claim 12, wherein inputs to one or more stages of the finite state machine include one or more reserved inputs, the method further comprising using at least one of the reserved inputs to update the operation of the finite state machine.

17. (Previously Presented) The method of claim 15, wherein inputs to one or more stages of the finite state machine include one or more reserved inputs, the method further comprising using at least one of the reserved inputs to update the operation of the finite state machine.

18. (Previously Presented) The method of claim 12, wherein the one or more additional stages include a final stage having an output specifying 1) a current action to be taken in order to generated the output message, and 2) a next state of said finite state machine.

19. (Previously Presented) The method of claim 12, the method further comprising sending the output message to a second device using the destination data format and the destination communication protocol, both of which are supported by the second device.

20. (Currently Amended) An apparatus, comprising:

one or more processors; and

a memory storing program instructions executable by the one or more processors to cause the apparatus to:

receive an input message; and

perform data format conversion and protocol conversion of the input message to generate an output message using a multi-stage, poly-dimensional finite state machine having at least one stage that has at least two inputs;

wherein the poly-dimensional finite state machine is configured to convert the received information based at least in part on three or more different inputs, and wherein the three or more different inputs include an input that specifies a destination device, a destination protocol corresponding to the destination device, or a destination application corresponding to the destination device.

21. (Previously Presented) The apparatus of claim 20, wherein at least a portion of the memory is reprogrammable to update operation of the finite state machine, wherein the input message originates from the apparatus, and wherein the apparatus is configured to convey the output message to a separate apparatus.

22. (Previously Presented) The apparatus of claim 21, wherein the finite state machine includes one or more reserved inputs, and wherein the reserved inputs are usable, via reprogramming of the memory, to update operation of the finite state machine to accommodate a future communication protocol and/or data format.

23. (Currently Amended) The apparatus of claim 20, wherein inputs to various stages of the finite state machine include inputs indicative of a communication protocol of the input message, a data format of the input message, a communication protocol of the output message, and a data format of the output message;

and wherein the inputs to various ~~stage~~ stages of the finite state machine further include one or more of the following inputs: 1) inputs indicative of a) the type of source application that originated the input message and b) the type of destination application to which the output message is directed; 2) inputs indicative of a) the type of a first device from which the input message originated and b) the type of a second device to which the output message is directed; 3) input indicative of a current connection status between the first and second devices[[,]]; and 4) input indicative of the current state of the finite state machine.

24. (Previously Presented) The apparatus of claim 20, further comprising:

a plurality of sender units configured to transmit the output message;

a message router configured to receive the output message and to determine one of the plurality of sender units to send the output message according to a desired communication protocol for the output message.

25. (Previously Presented) The apparatus of claim 21, wherein the apparatus is a portable wireless device, and wherein the input message originates from a separate apparatus.

26. (Currently Amended) An apparatus, comprising:

a hardware unit configured to implement a message converter having a finite state machine[[,]]; ~~and~~

wherein the finite state machine is a poly-dimensional state machine that performs data format and protocol conversion on an input message having a first data format and a first communication protocol to produce an output message having a second data format and a second communication protocol, wherein the data format and protocol conversion is based at least in part on three or more different inputs, and wherein the three or more inputs include an input that specifies a destination device, the second communication protocol, or the second data format.

27. (Previously Presented) The apparatus of claim 26, further comprising a memory having stored therein values used to implement the finite state machine, wherein the memory is reprogrammable to update the stored values used to implement the finite state machine, altering operation of the message converter.

28. (Previously Presented) The apparatus of claim 26, wherein the apparatus is a portable device, wherein the apparatus is configured to use the message converter to communicate with a plurality of devices that do not have a corresponding message converter, and wherein the logic unit is an FPGA or an ASIC.

29. (Currently Amended) The apparatus of claim 26, wherein the finite state machine is a multi-stage finite state machine;

wherein inputs to various stages of the finite state machine include inputs indicative of a first communication protocol of the input message, a first data format of the input message, a second communication protocol of the output message, and a second data format of the output message; and

~~and~~ wherein the inputs to various stage of the finite state machine further include one or more of the following inputs: 1) inputs indicative of first and second application types for a first application originating the input message and a second application for which the output message is destined, respectively; 2) inputs indicative of a first device type and a second device type for a first device that originated the input message and a second device for which the output message is destined, respectively[[,]]; 3) input indicative of a current connection status between the first and second devices; and 4) input indicative of a current state of the finite state machine.

30. (Previously Presented) The apparatus of claim 26, wherein the logic unit is further configured to recognize a communication protocol and a data format associated with the input message, wherein the input message is received from another apparatus.

31. (Previously Presented) An apparatus, comprising:

first means for receiving information of a source format, wherein the received information indicates a destination device;

second means for executing instructions that cause the apparatus to convert the received information from the source format to a destination format, wherein said converting includes using a poly-dimensional finite state machine that is configured to convert the received information based at least in part on three or more different input variables, and wherein the second means is configured for supporting converting the received information to at least one format other than the destination format; and

third means for transmitting the converted information to the destination device using the destination format.

wherein the three or more different input variables include a variable that specifies the destination device, a destination protocol corresponding to the destination device, or a destination application corresponding to the destination device.

32. (Previously Presented) The apparatus of claim 31, wherein the apparatus is a portable wireless device, and wherein the second means includes a reprogrammable memory.

33. (Previously Presented) The apparatus of claim 31, wherein the finite state machine includes a multi-stage pipeline comprising a first stage and at least one subsequent stage, and wherein the first stage is configured to use the three or more different input variables.

34. (Previously Presented) One or more computer readable memory media having stored thereon instructions that, in response to execution by a computing device, cause the computing device to implement a multi-stage, poly-dimensional finite state machine for converting an input message to an output message, including converting a first communication protocol of the input message to a second communication protocol for the output message, and further including converting a first data format of the input message to a second data format of the output message;

wherein the poly-dimensional finite state machine is configured to convert the received information based at least in part on three or more different inputs, and wherein the three or more different inputs include an input that specifies a destination device, the second communication protocol, or the second data format.

35. (Previously Presented) The computer readable memory media of claim 34, wherein the media stores program instructions executable by the computing device to receive the input message wirelessly or transmit the output message wirelessly.

36. (Currently Amended) The computer readable memory media of claim 34, wherein the three or more inputs include inputs indicative of the first and second communication protocols and inputs indicative of the first and second data formats; and

~~and~~ wherein the inputs to various stage of the finite state machine further include one or more of the following inputs: 1) inputs indicative of first and second application types for a first application originating the input message and a second application for which the output message is destined, respectively; 2) inputs indicative of a first device type and a second device type for a first device that originated the input message and a second device for which the output message is destined, respectively[[,]]; 3) input indicative of a current connection status between the first and second devices; and 4) input indicative of a current state of the finite state machine.